



Fighting Back Flooding at Caterham High School

Redbridge Council has successfully delivered a critical flood alleviation scheme for Caterham High School, located at a vulnerable point in the Clayhall catchment area working with its partners Kenson Highways, SANDS, Bluesky Landscaping and Thames Water and the Department for Education.

Historically, this low-lying area has been severely impacted by flooding, prompting the Council to prioritise significant flood mitigation efforts. The new project aims to protect the school and surrounding community from future flood events, making the school environment safer and more resilient.

This project was made possible through funding grants from Thames Water and the Department for Education, with additional financial support from Redbridge Council to cover the remaining budget. Recognising the importance and potential impact of the flood alleviation measures, Thames Water increased its funding as the project moved into detailed design and implementation stages, allowing the team to expand on innovative solutions for the scheme.



Rain garden construction



Planter construction





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In collaboration with Kenson Highways and SANDS, a comprehensive flood analysis and Sustainable Drainage Systems (SuDS) design were developed. SANDS's design incorporates 175 cubic meters of water storage through a combination of aboveground and underground SuDS elements. Key features include specially designed rain gardens and planters, that double as surface water management tools in key locations around the school, capturing and attenuating surface water to reduce the risk of overflow and flooding.

The site and project was confined to within the school grounds, further work is being drawn up for the wider catchment area to continue to further reduce flooding in the Clayhall area.



Attenuation tank construction



Water butt installation



Rain garden construction





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There are a total of five planters and one rain garden installed at the school, alongside four large 1,000 litre water butts installed on site. The main piece of the work revolved around the attenuation tank which can hold up to 160 cubic metres of water.

To put the size of flood alleviation measures into perspective, the water storage volume would equate to around 2,333 5-minute showers or 9,722 minutes of continuous garden hose usage which is about 6.75 days!

Kenson Highways played a crucial role in executing the project efficiently. With a short construction window during the school's summer break, the Kenson team worked diligently to complete the project on time and within budget. Their efficient project management minimised disruption to the school and ensured that the flood alleviation system was ready for the new school year.



SuDS planter complete



Rain garden constructed





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Redbridge Council also prioritised community involvement and education upon scheme completion. The project team, alongside the Deputy Leader, Councillor Vanisha Solanki, and the Cabinet Member for Environment and Sustainability, Councillor Jo Blackman, held an interactive session with Year 7 students at Caterham High School. The event included educational activities about flood management, and students were invited to participate in planting activities as part of the new green infrastructure. This engagement aimed to foster a greater understanding of flood resilience and the importance of environmental stewardship among students.



Cllr Solanki (middle) planting with Caterham High School students



Cllr Blackman left planting with Caterham High School students and Headteacher (right) Belinda Chapple



Photo of the team with the students at Caterham High School



